

Claims

What we claim is defined as follows:

1. A computer input pointing device which comprises its casing, an upper movable steering element, steering element's movement detector, and the system transmitting information about such movement to the computer, wherein the steering element (3) is supported by a bearing attached to the casing (2), with the possibility of two dimensional spherical movement, while the center of the spherical surface (4) defined by the movement of the steering element (3) in relation to the bearing is situated above the largest horizontal secant section of the steering element (3).
2. The input pointing device according to claim 1, wherein the center of the spherical surface (4) defined by the movement of the steering element (3) in relation to the bearing is situated above the steering element (3).
3. The input pointing device according to claim 1, wherein the said bearing is a surface of spherical shape (21a).
4. The input pointing device according to claim 1, wherein the said bearing has a form of a rack composed of sections bent in a spherical way (21c).

5. The input pointing device according to claim 1 or 3 or 4, wherein the said bearing has ball bearings (21e).
6. The input pointing device according to claim 1, wherein the said bearing is a ball bearing (21b).
7. The input pointing device according to claim 1, wherein the said bearing has a form of perpendicular, mutually connected flat rolling or sliding bearings (21f, 21g), of which one (21f) is connected to the steering element (3) and the other (21g) to the casing of the input pointing device (1e).
8. The input pointing device according to claim 1, wherein the steering element (3) rests freely on the said bearing.
9. The input pointing device according to claim 1, wherein the steering element (3) has a possibility of relocation only over the spherical surface defined by the movement of the steering element (3) in relation to the said bearing.

10.The input pointing device according to claim 9, wherein the said bearing is provided with a hole (22), whereas the steering element (3) comprises the upper part (31) and protective lower part (33); the latter prevents the steering element (3) from falling out of the hole (22), both of which are linked by means of a connecting element (32) leading through the hole (22).

11.The input pointing device according to claim 9, wherein the steering element (3) has a hollow space inside (35) and a hole (36) in the lower surface, whereas the casing (2) has a protective upper part (24) which prevents the steering element (3) from being disconnected and which is linked with the casing (2) by means of a connecting element (23) leading through the hole (36).

12.The input pointing device according to claim 9, wherein the steering element (3) is provided with a dome part (34) for user's hand.

13.The input pointing device according to claim 1, wherein the upper surface of the steering element (3) has an ergonomic shape adjusted to the shape of user's hand.

14.The input pointing device according to claim 1, wherein the upper surface of the steering element (3) has an ergonomic shape adjusted to the shape of user's finger.

15.The input pointing device according to claim 1, wherein the steering element (3) movement detector has a form of micro-camera (5a).

16.The input pointing device according to claim 1, wherein the steering element (3) movement detector is provided with a light emitter (5b), whose ray, having been reflected from the steering element, is read by an optical sensor (5c).

17.The input pointing device according to claim 15 or 16, wherein the steering element (3) is covered with a network of graphic perforations.

18.The input pointing device according to claim 1, wherein the steering element (3) movement detector has a form of a dome (5d) and a system of perpendicular rollers (5e).

19.The input pointing device according to claim 1, wherein it is provided with repositioning elements which enable the steering element (3) to recover its central position after being relocated.

20.The input pointing device according to claim 19, wherein the repositioning element has a form of a spring (6a).

21.The input pointing device according to claim 1 or 19, wherein it comprises a switch (8) for the steering element (3) movement detector, with a provision that the steering element (3) movement detector is ON while the steering element (3) and the said bearing in the casing are being pressed by user's finger or hand.

22.The input pointing device according to claim 1, wherein it comprises supporting elements to maintain the steering element's (3) position after its relocation.

23.The input pointing device according to claim 1, wherein it comprises supporting elements to maintain the steering element's (3) position after relocation, with a provision that the connecting element (23, 32) is built in a telescope fashion and the supporting elements comprise an electromagnet (7a) shortening the length of the connecting element as well as that of an adversely acting spring (7b), both of which are situated in the segments of the connecting element (23, 32).